AMENDMENTS TO THE CLAIMS

Please cancel claims 1, 2, 6-8 and 21 without prejudice, such that the status of the claims is as follows:

1-2. (Canceled)

3. (Previously Presented) A method of forming a magnetoresistive reader with planar top shield topography and low parasitic resistance, the method comprising:

defining a stripe height back edge of a magnetoresistive sensor of the magnetoresistive reader, wherein defining the stripe height back edge of the magnetoresistive sensor comprises:

depositing a plurality of magnetoresistive sensor layers;

selectively patterning a first photoresist layer on the magnetoresistive sensor layers, the first photoresist layer leaving exposed a first region of the magnetoresistive sensor layers; and

removing the exposed first region of the magnetoresistive sensor layers; and

subsequently defining a reader width of the magnetoresistive sensor, wherein defining the reader width of the magnetoresistive sensor comprises:

selectively patterning a second photoresist layer on the magnetoresistive sensor layers, the second photoresist layer leaving exposed a second region of the magnetoresistive sensor layers; and

removing the exposed second region of the magnetoresistive sensor layers.

4. (Original) The method of claim 3 and further comprising:

defining a stripe height front edge of the magnetoresistive sensor layers.

5. (Previously presented) The method of claim 4 wherein defining the stripe height front edge of the magnetoresistive sensor comprises:

lapping an air bearing surface of the magnetoresistive sensor layers.

6-8. (Canceled)

9. (Previously presented) A method of forming a magnetoresistive reader with planar shield topography and low parasitic resistance, the method comprising:

depositing a stack of magnetoresistive sensor layers;

selectively patterning a first photoresist layer on the stack of magnetoresistive sensor layers, the first photoresist layer serving to define a stripe height back edge of the magnetoresistive sensor by leaving exposed a first region of the stack of magnetoresistive sensor layers;

removing the exposed first region of the stack of magnetoresistive sensor layers;

removing the first photoresist layer;

selectively patterning a second photoresist layer on the stack of magnetoresistive sensor layers, the second photoresist layer serving to define a reader width of the magnetoresistive sensor by leaving exposed a second region of the stack of magnetoresistive sensor layers;

removing the exposed second region of the stack of magnetoresistive sensor layers;

depositing current contacts such that the current contacts are in electrical contact with opposite edges of the stack of magnetoresistive sensor layers;

removing the second photoresist layer; and

lapping an air bearing surface of the magnetoresistive sensor to define a stripe height front edge of the magnetoresistive sensor.

10. (Previously presented) The method of claim 9 and further comprising:

backfilling an insulating material into the removed first region prior to the removal of the first photoresist layer.

11. (Previously presented) The method of claim 10 wherein the insulating material is Al_2O_3.

12. (Previously presented) The method of claim 10 wherein the insulating material is deposited to a thickness similar to a thickness of the stack of magnetoresistive sensor layers, such that the insulating layer survives the step of removing the exposed second region.

13. (Previously presented) The method of claim 9 wherein a top surface of the current contacts is substantially level with a top surface of the stack of magnetoresistive sensor layers.

14. (Previously presented) The method of claim 9 and further comprising:

depositing a top gap layer on the current contacts and on the stack of magnetoresistive sensor layers; and

depositing a top shield layer on the top gap layer.

15. (Previously presented) The method of claim 14 wherein the top shield layer is substantially planar.

16. (Previously presented) The method of claim 9 wherein a pedestal, a permanent magnet seed, and a permanent magnet are sequentially deposited beneath the current contacts and adjacent to the stack of magnetoresistive sensor layers.

17. (Previously presented) The method of claim 9 wherein a bottom shield layer and a bottom gap layer are sequentially deposited prior to the deposit of the stack of magnetoresistive sensor layers.

18. (Previously presented) The method of claim 17 wherein the bottom shield layer and the bottom gap layer remain when exposed first region of the stack of magnetoresistive sensor layers is removed.

19-20. (Canceled)

21. (Canceled)

22. (Previously Presented) A method of forming a magnetoresistive reader with planar top shield topography and low parasitic resistance, the method comprising:

defining a stripe height back edge of a magnetoresistive sensor of the magnetoresistive reader, wherein defining the stripe height back edge of the magnetoresistive sensor of the magnetoresistive reader comprises:

depositing a stack of magnetoresistive sensor layers;

selectively patterning a first photoresist layer on the stack of magnetoresistive sensor layers, the first photoresist layer serving to define a stripe height back edge of the magnetoresistive sensor by leaving exposed a first region of the stack of magnetoresistive sensor layers;

removing the exposed first region of the stack of magnetoresistive sensor layers; and

removing the first photoresist layer; and

subsequently defining a physical reader width of the magnetoresistive sensor, wherein defining the physical reader width of the magnetoresistive sensor comprises:

selectively patterning a second photoresist layer on the stack of magnetoresistive sensor layers, the second photoresist layer serving to define a reader width of the magnetoresistive sensor by leaving exposed a second region of the stack of magnetoresistive sensor layers; and

removing the exposed second region of the stack of magnetoresistive sensor layers.

23. (Previously presented) The method of claim 22 and further comprising:

depositing current contacts such that the current contacts are in electrical contact with opposite edges of the stack of magnetoresistive sensor layers;

removing the second photoresist layer; and

lapping an air bearing surface of the magnetoresistive sensor to define a stripe height front

edge of the magnetoresistive sensor.

24. (Previously presented) The method of claim 23 and further comprising:
backfilling an insulating material into the removed first region prior to the removal of the first photoresist layer.

25. (Previously presented) The method of claim 24 wherein the insulating material is Al_2O_3.

26. (Previously presented) The method of claim 24 wherein the insulating material is deposited to a thickness similar to a thickness of the stack of magnetoresistive sensor layers, such that the insulating layer survives the step of removing the exposed second region.

27. (Previously presented) The method of claim 23 wherein a top surface of the current contacts is substantially level with a top surface of the stack of magnetoresistive sensor layers.

28. (Previously presented) The method of claim 23 and further comprising:
depositing a top gap layer on the current contacts and on the stack of magnetoresistive sensor layers; and
depositing a top shield layer on the top gap layer.

29. (Previously presented) The method of claim 28 wherein the top shield layer is substantially planar.

30. (Previously presented) The method of claim 23 wherein a pedestal, a permanent magnet seed, and a permanent magnet are sequentially deposited beneath the current contacts and adjacent to the stack of magnetoresistive sensor layers.

31. (Previously presented) The method of claim 23 wherein a bottom shield layer and a bottom gap layer are sequentially deposited prior to the deposit of the stack of magnetoresistive sensor layers.

32. (Previously presented) The method of claim 31 wherein the bottom shield layer and the bottom gap layer remain when exposed first region of the stack of magnetoresistive sensor layers is removed.